

ABSTRACT

The well reference apparatus and method of the present invention includes a reference member preferably permanently installed within the borehole at a preferred depth and orientation in one trip into the well. The reference member provides a permanent reference for the location of all operations, particularly in a multi-lateral well. The assembly of the present invention includes disposing the reference member on the end of a pipe string. An orienting tool such as an MWD collar is disposed in the pipe string above the reference member. This assembly is lowered into the borehole on the pipe string. Once the preferred depth is attained, the MWD is activated to determine the orientation of the reference member. If the reference member is not oriented in the preferred direction, the pipe string is rotated to align the reference member in the preferred direction. This process is repeated for further corrective action and to verify the proper orientation of the reference member. Upon achieving the proper orientation of the reference member, the reference member is set within the borehole and the pipe string is disconnected from the reference member and retrieved.

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